

### **AMENDMENTS TO THE DRAWINGS**

Please replace Figures 1 and 2 of the drawings as originally filed with the attached replacement sheets. Figure 1 is being replaced to improve the publishable quality. Figure 2 is being replaced to properly identify the edge 7. Please also add the attached sheet of formal drawings (FIGs. 3A and 3B). No new matter has been added. Accordingly, it is respectfully requested that the enclosed drawings be approved and entered in the subject application.

### **REMARKS**

The Specification has been amended to recite certain elements shown in the drawings. No new matter is added by virtue of the within amendments; support therefore can be found throughout the specification and original claims of the application.

### **Drawings**

Regarding Claim 17, Figure 2 and the associated description have been amended to refer to an "edge". Regarding Claim 18, new Figure 3A has been added to show a gas inlet pipe with threads to contribute to gas swirling. Regarding Claim 20, new Figure 3B has been added to show a feature in a gas inlet pipe that could be any of a screen, grid or diaphragm to contribute to gas swirling. Among other places, support for each of these elements can be found in the specification as originally filed in Claims 3, 4 and 6, respectively, as well as in paragraph [0013]. No new matter has been added. Accordingly, it is respectfully requested that the enclosed drawings be approved and entered in the subject application.

### **Specification**

The Specification was previously objected to for allegedly failing to define the element "Wm" shown in the figures. It is respectfully submitted that the element "Wm" is a mean or average velocity of the gas flow. The Specification has been amended to recite the element "Wm" where appropriate. The Specification has also been amended to conform with the drawing changes noted above.

### **Claim Rejections**

In the Office Action, Claims 15-17 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 4,659,455 to Dall et al. The Examiner's grounds for rejection are herewith traversed, and reconsideration is respectfully requested.

Dall et al. is directed to the object of avoiding or minimizing any dead zone of unwithdrawable catalyst at the bottom of a reactor, if the catalyst is to be withdrawn from that reactor by means of a duct located in the bottom of the reactor. Dall et al. use a special arrangement of gas and liquid inlet pipes as well as a special arrangement of radial internal plates. The feeding pipes 7 and spray tips 5 of Dall et al. are for introducing liquid exclusively but do not introduce gas (see col. 3, lines 41-45 and 51-53). Gas is injected through plain holes 9 without swirling elements. In short, Dall et al. merely discloses a means for withdrawal of a catalyst.

In contrast, Claim 15 recites a device for introducing gas into a fluidized bed including at least one gas inlet pipe located underneath and/or above the fluidized bed, wherein the gas inlet pipe has gas-swirling means at its mouth. Dall et al. do not disclose or suggest such a structural configuration because the pipe 7 and spray tip 5 of Dall et al. are for introducing liquid. Accordingly, Claim 15 and the claims depending therefrom distinguish the subject invention from Dall et al. Therefore, withdrawal of the rejection is respectfully requested.

In the Office Action, Claim 18 was rejected under 35 U.S.C. § 103 (a) over Dall et al. The Examiner's grounds for rejection are herewith traversed, and reconsideration is respectfully requested.

It is respectfully submitted that the Examiner's statement that including a thread is obvious does not cure the deficiencies noted above with respect to Claim 15 and, therefore, Claim 18 patentably distinguishes over Dall et al. for at least the same reasons as Claim 15 and an action acknowledging the same is respectfully requested.

In the Office Action, Claims 19 and 20 were rejected under 35 U.S.C. § 103 (a) over Dall et al. in view of U.S. Patent No. 4,715,996 to Lambousy et al. The Examiner's grounds for rejection are herewith traversed, and reconsideration is respectfully requested.

It is respectfully submitted that Lambousy et al. do not cure the deficiencies noted above with respect to Claim 15 and, therefore, Claims 19 and 20 patentably distinguish over the combination of Dall et al. and Lambousy et al. for at least the same reasons as Claim 15 and an action acknowledging the same is respectfully requested.

Furthermore, for the sake of argument, even if Dall et al. and Lambousy et al. were combined as suggested by the Examiner, the claimed invention would not be obtained. Lambousy et al. disclose a bubble cap used for introducing gas into a reactor filled with a liquid (e.g., petroleum) but do not disclose means for introducing a gas into a fluidized bed reactor. The bubble cap of Lambousy et al., even if used in a fluidized bed reactor or with the inlet pipe 7 and spray nozzle 5 of Dall et al., would not produce a gas inlet pipe having swirling means at its mouth as recited by Claim 15. Therefore, Claims 19 and 20 of the subject application are not rendered obvious by the combination of references cited by the Examiner, and withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

In the Office Action, Claims 21 and 22 were rejected under 35 U.S.C. § 103 (a) over Dall et al. in view of U.S. Patent No. 4,329,526 to Bagley et al. The Examiner's grounds for rejection are herewith traversed, and reconsideration is respectfully requested.

It is respectfully submitted that Bagley et al. do not cure the deficiencies noted above with respect to Claim 15 and, therefore, Claims 21 and 22 patentably distinguish over the combination of Dall et al. and Bagley et al. for at least the same reasons as Claim 15 and an action acknowledging the same is respectfully requested.

In the Office Action, Claims 23-27 were rejected under 35 U.S.C. § 103 (a) over Bagley et al. in view of Dall et al. and U.S. Patent No. 6,177,599 to Cowfer et al. The Examiner's grounds for rejection are herewith traversed, and reconsideration is respectfully requested.

It is noted by the Examiner that Bagley et al. do not disclose a device wherein the gas inlet pipe has a gas-swirling means at its mouth (see page 6, 4<sup>th</sup> para. of the Office Action) as recited by Claim 23. Dall et al. are cited for this limitation. As noted above, Dall et al. do not disclose a gas inlet pipe having swirling means at its mouth but rather liquid inlets 7 with spray nozzles 5. Thus, even if the combination of references were proper, the claimed invention would not be obtained. Therefore, Claim 23 and each of the claims depending therefrom are not rendered obvious by the combination of references cited by the Examiner, and withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

Any additional fees or overpayments due as a result of filing the present paper may be applied to Deposit Account No. 04-1105. It is respectfully submitted this application is in condition for allowance, and such action is earnestly solicited.

If after reviewing this amendment, the Examiner believes that a telephone interview would facilitate the resolution of any remaining matters the undersigned attorney may be contacted at the number set forth herein below.

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Respectfully submitted,

  
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